CLAIMS

What is claimed is:

1. A method of controlling a DC feed from a subscriber loop interface circuit (SLIC), comprising the steps of:

switching from a normal mode DC feed following a first characteristic curve to a modified mode DC feed following a second characteristic curve when $V_M \leq V_{THRESH1}$, wherein V_M is a subscriber loop voltage; and

switching from the modified mode to the normal mode when $V_M \geq V_{THRESH2}$, wherein $V_{THRESH1} < V_{THRESH2}$.

2. The method of claim 1 wherein the first characteristic curve is linear, wherein the first characteristic curve is defined by an open circuit voltage, V_{OC}, and a slope corresponding to a pre-determined impedance.

3. The method of claim 1 wherein the first characteristic curve is linear, wherein the second characteristic curve is defined by a target open circuit voltage, V_{OC_TARGET}, and a slope corresponding to a pre-determined impedance.

4. The method of claim 1 wherein the first and second characteristic curves are linear, wherein the first characteristic curve is defined by an open circuit voltage, V_{OC}, and a pre-determined slope, wherein the second characteristic curve is defined by a target open circuit voltage, V_{OC_TARGET}, and the same pre-determined slope corresponding to a pre-determined impedance.

5. The method of claim 4 wherein the pre-determined impedance is approximately 320Ω.

6. A subscriber loop interface circuit apparatus comprising:

control circuitry for controlling a subscriber loop DC feed; and

a plurality of programmable registers storing values defining a first characteristic curve and a second characteristic curve, wherein the control circuitry switches from a normal mode DC feed following a first characteristic curve to a modified mode DC feed following a second characteristic curve when $V_M \leq V_{THRESH1}$, wherein V_M is a subscriber loop voltage, wherein the control circuitry switches from the modified mode to the normal mode when $V_M \geq V_{THRESH2}$, wherein $V_{THRESH1} < V_{THRESH2}$.

7. The apparatus of claim 6 further comprising a digital signal processor.

8. The apparatus of claim 6, wherein one of the plurality of programmable registers stores an open circuit voltage value, wherein the open circuit voltage value in conjunction with a pre-determined slope defines a linear first characteristic curve.

9. The apparatus of claim 6, wherein one of the plurality of programmable registers stores a value enabling computation of a target open circuit voltage value, wherein the target open circuit voltage value in

conjunction with a pre-determined slope defined a linear second characteristic curve.

10. The apparatus of claim 9 wherein the plurality of registers store an open circuit voltage value (V_{OC}), a first relative threshold (V_{THL}), a second relative threshold (V_{THH}), and a relative target open circuit voltage (V_{OC_DELTA}), wherein $V_{THRESH1}=V_{OC}+V_{THL}$, $V_{THRESH2}=V_{OC}+V_{THH}$, and the target open circuit voltage = $V_{OC}+V_{OC\_DELTA}$.

11. The apparatus of claim 6 wherein the first and second characteristic curves are linear, wherein the first characteristic curve is defined by an open circuit voltage, V_{OC}, and a pre-determined slope, wherein the second characteristic curve is defined by a target open circuit voltage, V_{OC_TARGET}, and the same pre-determined slope corresponding to a pre-determined impedance.

12. The apparatus of claim 11 wherein the pre-determined impedance is approximately 320Ω.